



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,733	05/04/2005	Masatomi Sato	U 015756-4	7957
140 7590 05/29/2008				
LADAS & PARRY LLP 26 WEST 61ST STREET NEW YORK, NY 10023				
EXAMINER				
HOOK, JAMES F				
ART UNIT		PAPER NUMBER		
3754				
MAIL DATE		DELIVERY MODE		
05/29/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/533,733

**Applicant(s)**

SATO, MASATOMI

**Examiner**

James F. Hook

**Art Unit**

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (085) in view of Fisher. The reference to Ito discloses the recited laminated tube comprising two or more resin layers of low permeability resins including PBN and ETFE, where the ETFE layer can be used as the innermost layer 1, layer 2 can be PBN, the inner layer can be made conductive by adding conductive material to the layer, the different materials can be used alone or in combination which discloses combining both of these resins where the manner used to mix is considered a method step which would not directly affect the final product and therefore it is immaterial what method of mixing is used to arrive at the final product in an article claim such as a mixture of two plastics, where inherently this is one method normally used to mix the plastics. The reference to Ito discloses all of the recited structure with the exception of utilizing LCP for layers that can include PBN. The reference to Fisher discloses that it is old and well known in the art to substitute LCP for layers which normally can be formed of PBN, or PBT (column 6, lines 14-43 which show all the equivalent materials used as barrier layers in hoses). It would have been obvious to substitute LCP for the PBN layers in Ito as suggested by Fisher where such is an equivalent material to fluoropolymers utilized in barrier layers of

hoses and would provided barrier properties different than that of fluoropolymers to meet the environment that the hose is to be used.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishino (278) in view of Fisher. The reference to Nishino discloses the recited laminated tube comprising two or more resin layers of low permeability resins including PBN and ETFE, where the ETFE layer can be used as the innermost layer 10, layer 12 can be PBN, the inner layer can be made conductive by adding conductive material to the layer, the different materials can be used alone or in combination which discloses combining both of these resins where the manner used to mix is considered a method step which would not directly affect the final product and therefore it is immaterial what method of mixing is used to arrive at the final product in an article claim such as a mixture of two plastics, where inherently this is one method normally used to mix the plastics, there are also crystalline materials disclosed which are considered liquid crystalline polymers. The reference to Fisher discloses that it is old and well known in the art to substitute LCP for layers which normally can be formed of PBN, or PBT (column 6, lines 14-43 which show all the equivalent materials used as barrier layers in hoses). It would have been obvious to substitute LCP for the PBN layers in Ito as suggested by Fisher where such is an equivalent material to fluoropolymers utilized in barrier layers of hoses and would provided barrier properties different than that of fluoropolymers to meet the environment that the hose is to be used.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ainsworth in view of Fisher. The reference to Ainsworth discloses the recited laminated tube comprising two or more resin layers of low permeability resins including LCP and ETFE, where the LCP layer can be used as the innermost layer 10, layer 12 can be ETFE. The reference to Ainsworth discloses all of the recited structure with the exception of disclosing combining the two materials in the inner layers to form another layer, and providing conductive material to the inner layer. The reference to Fisher discloses that it is old and well known in the art to combine the materials of two layers in another layer, and to provide the inner layer with conductive material. It would have been obvious to form a layer in Ainsworth of a combination of the two materials and to provide the inner layer with a conductive additive as suggested by Fisher where such is another layer which can be provided to a tube having the mixed materials would allow for better attachment to the other layers, and providing conductive material would prevent static build up in the tube which could result in failure of the tube and injury to the user.

### ***Response to Arguments***

Applicant's arguments filed May 12, 2008 have been fully considered but they are not persuasive. The arguments generally are directed at the teachings of Fisher and whether such teaches the equivalence of using LCP in place of a fluoropolymer, and whether the combination of LCP with ETFE is taught. As set forth above the section of Fisher discloses the equivalence of PBN, PBT, and LCP and that such can be

Art Unit: 3754

combined with other materials which included fluoropolymers of which ETFE is known from the base references to be a form of fluoropolymer used for barrier layers, and therefor it is considered that Fisher does in fact teach the equivalence of the materials which are all known barrier materials used to form layers of a tube, and that such can be provided alone or mixed with other barrier materials of the same list thereby teaching the equivalent use of the these materials in hose structure. It is also noted that the rejection above has been changed such that the material being substituted for in the base references is PBN, and therefore the argument that the modified hose would not have the proper combination of layers when PBN was no longer a choice for use in the inner layers, such is moot in the fact that such is being modified by the Fisher reference and the resulting tube would have a LCP layer as well as an ETFE layer thereby meeting the claim structure.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference to Tateyama which teaches the use of PPS as well in barrier layers of tubes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Thursday.

Art Unit: 3754

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James F. Hook/  
Primary Examiner, Art Unit 3754

JFH